TRAIL & Landscape

A PUBLICATION CONCERNED WITH
NATURAL HISTORY AND CONSERVATION

TRAIL & LANDSCAPE Vol. 4 No. 4 p. 105-132 Ottawa, Sept. - Oct., 1970

TRAIL & LANDSCAPE

Editorial Committee
Barbara Coleman
Sheila Thomson

Production Staff
Leone Brown
Henk Sweers
Harry Thomson

THE OTTAWA FIELD-NATURALISTS' CLUB

- Founded 1879 -

President: Dr. T. Mosquin, Box 86, Aylmer East, Quebec
Secretary: Mr. A. W. Rathwell, Can. Wildlife Service

Objectives of the Club: To promote the appreciation, preservation and conservation of Canada's natural heritage; to encourage investigation and publish the results of research in all fields of natural history and to diffuse information on these fields as widely as possible; to support and co-operate with organizations engaged in preserving, maintaining or restoring quality environments for living things.

Club Publications: THE CANADIAN FIELD-NATURALIST, official journal of the Club, devoted to the publishing of research in natural history. TRAIL & LANDSCAPE, a non-technical publication of general interest to local naturalists.

Field Trips, Lectures and other natural history activities are arranged for local members. See inside back cover.

Membership and Subscription Fees:
INDIVIDUAL MEMBERSHIP: $5.00 per year
FAMILY MEMBERSHIP: $7.00 per year; includes husband, wife, and dependent children. One copy of each publication will be sent to a household.
SUBSCRIPTION TO TRAIL & LANDSCAPE only...(no membership privileges): $3.00 per year.

Application for Memberships and Subscriptions:
Apply to The Ottawa Field-Naturalists' Club,
Box 3264 Postal Station C, Ottawa 3

YOU ARE INVITED TO BECOME A MEMBER

TRAIL & Landscape

Vol 4 No 4

Published by
THE OTTAWA FIELD-NATURALISTS' CLUB

Editor: Mrs. G. R. Hanes
18 Briarcliffe Drive
Ottawa 9, Ontario

In this issue:

Save Gatineau Park - - - - - - - 106

Amphipod Crustaceans of the Ottawa Region 107
E.L. Bousfield

FON Annual Meeting - - - - - - - 115
V. Humphreys

Nature Conservation - Experience Overseas 116
M.M. Sweers

Western Sandpiper in Ottawa? - - - - 122
D.F. Brunton

Birds of the Spring, 1970 - - - - 123
R.M. Poulin

Wolffia - - - - - - - - - - 127
S.C. Thomson

OFNC Hamilton-Niagara Weekend - - - 130
T.J. Cole

Coming Events - - - inside back cover

Don't just stand there sobbing ....

S A V E G A T I N E A U P A R K

Gatineau Park today is a beautiful wilderness that we use, enjoy, and have hitherto taken for granted. Legally, it stands defenceless. As Bob Ingraham says, "Although Gatineau Park seems like a true park, with all the privileges of permanence which that status implies, ...it is still only a part of the Greenbelt, administered by the NCC, and subject to the whims of urban-oriented planners." The Long Range Development Plan now before the NCC would develop the southern half or more of the Park, destroying forever its present natural character and displacing its rich wildlife. The remaining wilderness would be vulnerable to increasing pressures, and still without legislated protection against further encroachment. The Park as we know it is in danger -- but must we throw up our hands and say "too bad" ? Gatineau Park is still wild today; if enough of us show that we want it kept that way, it could be a wild park for a long time yet.

People who care for wilderness are combining to try to save and protect it. Across the country, they are joining the National and Provincial Parks Association of Canada. In Ottawa, on June 24, about thirty concerned citizens met and formed the Ottawa-Hull Chapter of the NPPAC, and promptly adopted as a primary aim: "that this organization shall seek the preservation of the integrity and natural character of Gatineau Park, including the enactment of special protective legislation." Although protection for Gatineau Park is first on the program, the Chapter will press for creation of more parks readily accessible to Ottawa-Hull area residents. A dozen excellent, knowledgeable persons on the Executive are ready to do battle on your behalf.

If you have enjoyed an hour or a day in Gatineau Park, think what it means to ensure that its attractions will be there to enjoy again. Then join the newest Chapter of the National and Provincial Parks Association. Trail & Landscape readers are invited to attend the next meeting of the Ottawa-Hull Chapter, to be held in the Auditorium of the National Library building, Wellington St., Ottawa, on Tuesday, September 22, 1970. ...A.H.

AMPHIPOD CRUSTACEANS OF THE OTTAWA REGION

E. L. Bousfield
National Museum of Natural Sciences

The life of streams and ponds encompasses many animal groups, seldom encountered by naturalists, that are actually quite common and form a vital link in the food chain of fresh waters. The amphipod crustaceans are such a group. Morphologically not too distant from crabs, lobsters, and crayfish, the amphipods are nevertheless easily distinguished by their relatively small size, their slender, compressed, multi-segmented bodies, their lack of a carapace (thoracic shield) and their non-stalked or sessile eyes (fig. 1-3). Their 19 pairs of body appendages are arranged more like those of the opossum shrimp (see Dadswell and Bousfield, 1970). The head bears 2 pairs of sensory antennae, and several articulated mouthparts consisting of 2 pairs of maxillae, a pair of mandibles and a pair of maxillipeds. The thoracic region bears 7 pairs of walking legs of which the first 2 pairs are usually modified for grasping (subchelate). The walking legs are one-branched (uniramous) and each leg consists of 7 segments including the terminal claw or dactyl. All but the first pair of legs bear sac-like gills on the inner side of the coxal segment.

The six-segmented abdomen bears an anterior group of 3 pairs of swimming legs (pleopods) and a rearward group of 3 pairs of jumping legs (uropods). A tail plate or telson overhangs the vent. The motion of the pleopods maintains a continuous current of water from front to rear, along the under side of the body and thus aerates the gills. As in Mysis, the female carries her eggs and newly hatched young in a ventral thoracic marsupium formed by interlocking plates attached to the inner margins of some of the walking legs.

Although amphipods are small and secretive, hiding under debris and burrowing in the bottom, they are actually quite easily collected. Simple equipment such as hand nets, box traps, or even a kitchen strainer scooped through aquatic vegetation or bottom debris will seldom fail to collect a number of these very

(text continues on p 111)

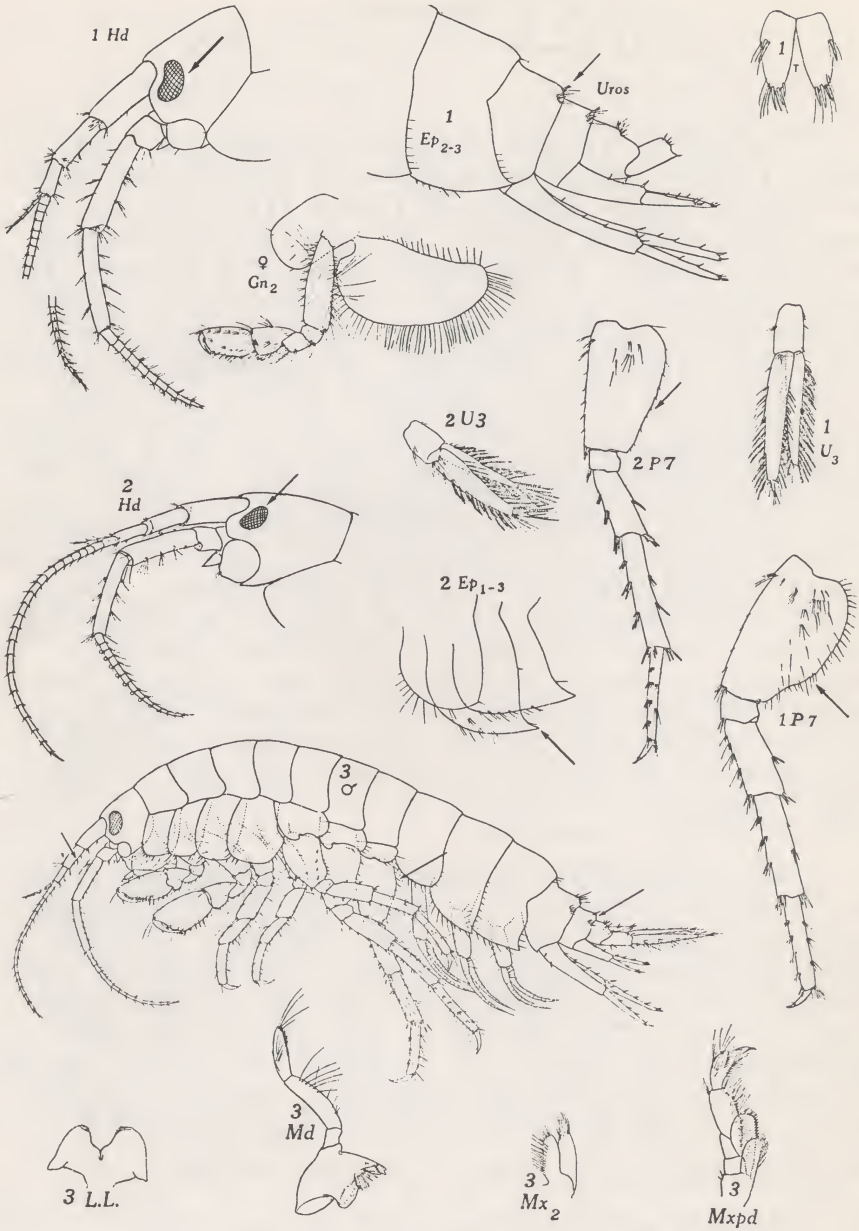


FIGURE 1

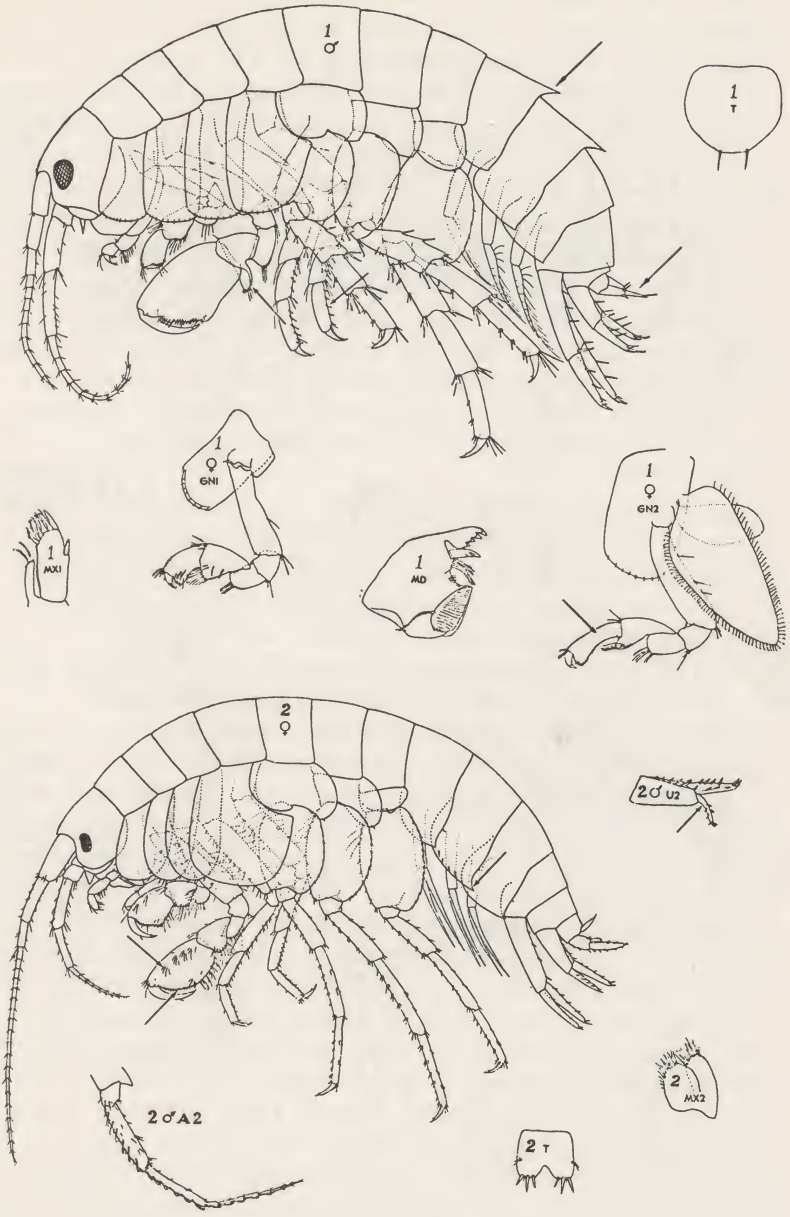
1 Gammarus pseudolimnaeus Bousfield Rideau River, Ont.

2 Gammarus lacustris Sars northern Quebec lakes

3 Gammarus fasciatus Say Ottawa R. above Chaudiere Falls

Legend for figures

A	Antenna
Ap	Abdominal since plate
Gn	Gnathopod
Hd	Head
LL	Lower Lip
Md	Mandible



Mx_1	Maxilla 1
Mx_2	Maxilla 2
Mxpd	Maxilliped
P	walking leg, thoracic leg
U	Uropod
Uros	Urosome, last 3 abdominal segments
T	Telson

FIGURE 2

1 Hyalella azteca Saussure Ottawa R., Ont.

2 Crangonyx laurentianus Bousfield Black L., P.Q.

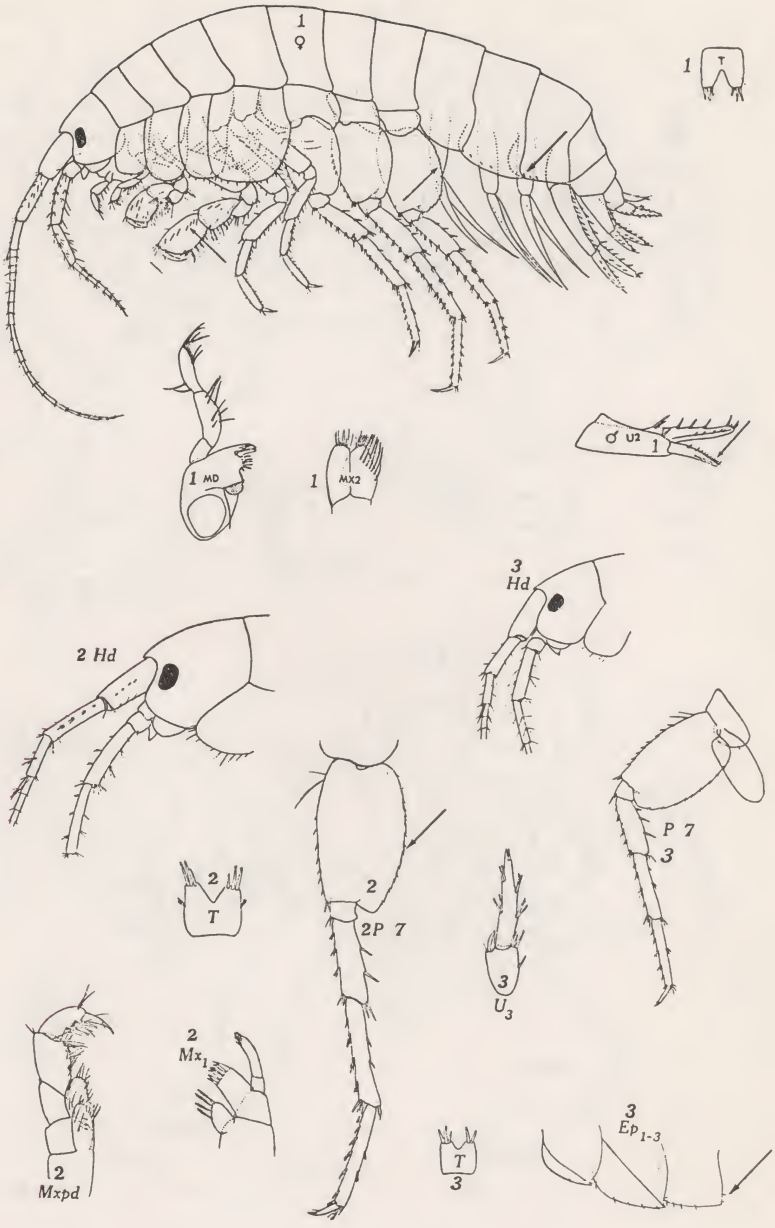


FIGURE 3

1 Crangonyx pseudogracilis Bousfield Rideau R., Ont.

2 Crangonyx gracilis Smith Beattie Point, Ont.

3 Crangonyx rivularis Bousfield well at Uplands, Ont.

active glistening little shrimps. If rapacious fish are not present, amphipods make ideal aquarium animals since our species are fairly tolerant of a wide range of physical conditions and can utilize almost any organic substance, vegetable or animal, as food. They reproduce and grow very rapidly under normal summer conditions, and females may bear several broods during the reproductive period. Like all crustaceans, and indeed, all joint-legged animals, amphipods grow by moulting. They pass through about 8 - 12 instars before reaching sexual maturity. In many species, the male "carries" the female in precopula, using the first two pairs of subchelate thoracic appendages for this purpose. Mating takes place when the female moults and her outer skeleton is still soft.

About 10 species or subspecies of amphipods have been recorded from the Ottawa region; most of them occur within the city limits. In the large, summer-warm, somewhat turbid and weedy rivers such as the Ottawa and Rideau, one usually finds Gammarus fasciatus, Hyalella azteca, and Crangonyx pseudogracilis (figs. 1-3, 2-1, 3-1, respectively). None of these animals has yet received a common name; all may be referred to simply as "scuds". In colder streams, springs, and even in wells we can expect to find Gammarus pseudolimnaeus and Crangonyx rivularis (figs. 1-1, and 3-3). In acid bog ponds and around the margins of lakes in the Precambrian Shield, especially in Gatineau Park and north and west of Ottawa, the large Crangonyx laurentianus is a common spring and early summer breeder (fig. 2-2). Further north, around the weedy margins of less acid lakes and shallow permanent ponds, occurs the large Gammarus lacustris that reaches a length of 3/4 of an inch (fig. 1-2). It ranges right across Canada, from the Arctic islands well south into alpine areas of the United States, and is believed to be widely dispersed by clinging to the underfeathers of waterfowl. Surface living amphipods such as Hyalella, and some species of Crangonyx, are believed to be wind-dispersed, -- how else may we explain their near ubiquity, even on remote islands such as Sable Island 100 miles off the coast of Nova Scotia? On the bottom of many deep cold lakes left by the retreating margin of the Champlain Sea we find the glacial relict species Pontoporeia hoyi. This species, like Mysis relicta, is planned as a separate topic in another issue of this journal.

Amphipods make excellent animals for research on fresh-water ecology, behaviour, and population dynamics because of their ready availability, lab hardiness, and high fecundity. All local species have an annual life cycle. The spring-breeding adults of "cold-water" species such as Crangonyx laurentianus die soon after release of the young. In this way, competition for food for the growing young is reduced in nutrient-poor environments, and the decomposition of dead adults facilitates restoration of nutrients to those waters. In "warm-water" groups (e.g. Gammarus fasciatus, Hyalella azteca, Crangonyx pseudogracilis), females carry several broods per summer, and earliest broods may reproduce before the fall freeze-up.

As an important component of the fresh-water food web, amphipods convert plant material in the form of dead leaves and detritus, diatoms and other algae, and some rooted aquatics into animal protein suitable for fish, and eventually for human consumption. Amphipods are heavily preyed upon by trout, lake trout, cisco, sunfish, perch, bass, and other game fish at some stage of their life history. Amphipods are also a prime food of predatory aquatic insects such as dragonfly nymphs, larvae of certain beetles, hellgrammites, and adult water scorpions and belostomatids. Gill-net and trap-net fishermen, however, sometimes find their nets chewed away by Gammarus that fancy the unicellular algae growing upon the twine. Amphipods are often abundant in the partially oxygenated "recovery" zone below severe pollution sources and sewer outfalls where they assist in speedy conversion of noxious substances to usable animal protein. The efficient coxal gills and accessory gills of Hyalella and some species of Crangonyx enable these animals to tolerate conditions of low oxygen and high carbon dioxide. Usually, however, the presence of amphipods indicates water conditions that are favourable to growth of aquatic vegetation, to fine fishing, and good swimming. For instance, if you find Crangonyx rivularis coming up in your well water, don't worry -- the water's fine!

Bousfield, E.L. 1958. Fresh-water Amphipod Crustaceans of Glaciated North America. Can. Field-Nat. 72(2):55-112.

Dadswell, M.J., and E.L. Bousfield. 1970. The Opossum Shrimp of the Ottawa Region. Trail & Landscape 4(1): 6-11.

KEY TO AMPHIPODS OF THE OTTAWA REGION

1 First two (occ. three) abdominal segments with backward projecting dorsal teeth or mucronations; last pair of uropods very short, one branched . . . . . *Hyalella azteca* (fig 2-1)

1 First three abdominal segments smooth above; last pair of uropods two-branched, usually extending beyond other uropods 2

2 Uropod 3, inner branch a very short lobe; last three abdominal segments smooth above; telson entire, notched at apex . . . . . *Crangonyx* (fig 3)

2 Uropod 3, both branches long, setose; last three abdominal segments with dorsal groups of spines or scattered setae (hairs); telson split to base 6

3 Mature animals large (13-17 mm); in acid or humic lakes . . . . . *C. laurentianus* (fig 2-2)

3 Mature animals small (5-10 mm); in high pH waters 4

4 Abdominal side plates 2 & 3 hind corner blunt; in springs and wells . . . . . *C. rivularis* (fig 3-3)

4 Abdominal side plates 2 & 3, hind corner produced as short tooth 5

5 Last walking leg (thoracic leg 7), basal segment hind margin with about 12 weak teeth; uropod 2, outer branch normally spinose in ♂, in swampy and marshy areas along the Ottawa River . . . . . *C. gracilis* (fig 3-2)

5 Walking leg 7, hind margin of basis with about 15-20 teeth or serrations; uropod 2 in ♂, outer branch bearing comb spines . . . . . *C. pseudogracilis* (fig 3-1)

6 Last three abdominal segments with dorsal and dorsolateral clusters of spines; thoracic leg 7 longest, not exceptionally broad at base . . . . . *Gammarus* 7

6 Last three abdominal segments with scattered setae above; thoracic leg 6 longest; basal segment of leg 7 very broad, plate-like . . . . . *Pontoporeia hoyi*

7 Body cross-banded or striped (in life); lower front corners of coxal plates armed with several long setae; legs 6 & 7 lacking distal basal lobes . . . . . *G. fasciatus* (fig 1-3)

7 Body more or less unicolorous; lower front corners of coxal plates with 1-2 short marginal setae; legs 6,7 with distal basal lobes 8

8 Thoracic leg 7, hind margin of basal segment richly setose; eye large, kidney-shaped; in streams and springs of limestone areas . . . . . *G. pseudolimnaeus* (fig 1-1)

8 Thoracic leg 7, hind margin of basal segment nearly bare; eye small, broad-reniform; in northern lakes and ponds . . . . . *G. lacustris* (fig 1-2)

WHAT ON EARTH ??

NATURE PUZZLE # 2

Its a perfect fall day for hiking in Gatineau Park, and as you stride along the trail, your eye is caught by a peculiar pattern on the bark of an old fallen birch tree. Being inquisitive, you pry a piece of the bark away from the rotten wood, and carry it home to look more closely at those marks - under a hand lens, under the dissecting microscope - and to ponder about what could have made them. The bark has been darkened by a coating of some sort; you surmise that it was once a growth of algae which had died and left this film of blackish material. But the whitish marks that appear to be scraped into the black film - what are they? After a while you guess what might have caused this pattern on the bark, but just to be certain, you

ASK A NATURALIST !

We did, and now we know. Do you?
(see page 126)

▼ x 1

◄ x 2 1/2

▼ x 10 Photos by G.R. Hanes

38th ANNUAL MEETING, FEDERATION OF ONTARIO NATURALISTS
Niagara Falls, April 10 - 11 - 12

Vi Humphreys

Although greeted on arrival by a dampish snowstorm and the ice bridge still intact across the Niagara gorge, a rewarding weekend was experienced by the 700 persons who attended the Annual Meeting, renewing old friendships, exchanging ideas, viewing interesting displays and art exhibits. One of the highlights was the election of our own past president, Hue MacKenzie, to the Board of Directors. The good wishes of all present, and especially the Ottawa contingent judging by the hand-clapping around me, was extended to Hue, and I'm sure members here join in their congratulations as well.

A motion to change the name from "Federation of Ontario Naturalists" to "Ontario Naturalists" was overwhelmingly rejected. Among resolutions passed, to both Federal and Provincial governments, were those covering use of snowmobiles and hovercraft; again to either ban non-returnable containers or impose a deposit fee; preservation of Rideau Waterway and reconstruction of canal locks to conform to originals, and addition of a hiking trail along the waterway. A varied program of excellent talks, slides, film shows, and photo salon followed the morning business session. The Federation's highest award, the Conservation Trophy, was presented amid a standing ovation to John Livingston, well-known TV producer of nature programs, author, and conservation authority, for his many years of work in natural history and conservation fields. The banquet speaker was the Hon. George Kerr, Minister, Department of Energy and Resources Management.

Seven field trips completed the weekend, among them a Bruce Trail outing, geology, Carolinian trees, and reptiles and amphibians of Niagara region. A bird trip to the Iroquois National Wildlife Refuge, said to be the site of the largest concentration of waterfowl in eastern North America, was excellent. The honking and flight of thousands of Canada Geese, up to 100,000 at peak of migration, was a thrilling sight, a perfect way to end a most pleasant weekend.

NATURE CONSERVATION - EXPERIENCE OVERSEAS

by Marguerite Sweers

All of a sudden, it seems, there is in this Club an outburst of discussions on the topic of nature conservation. Conservation is not new, but what is new, I think, is the upsurge of people who care about their natural environment; so much so that more than a few feel ready to get involved if need be...and if specific occasions arise for a direction of their good will.

In the country where I come from, the population is so dense, the territory so exceedingly small to serve everyone's needs, that naturalists were hard pressed decades ago to interest public opinion in their cause. For every square mile of land a tough struggle was or is going on to designate its destiny. More highways are to be built, more railways, manufacturing plants, and so on. There is a desperate need for more housing to accommodate Holland's 12 million people; the farmers clamour about lack of agricultural land, and rightly so. What about needed recreational facilities? While in all categories the need is pressing, the growth of territory by making land out of seas (a process that still goes on) obviously is limited. Long before a new polder is finished, the use rigidly planned in tough bargaining, there is one general agreement: "if only it were a hundred times larger we could do more with it".

One would expect that in such a hard-pressed situation people would not have patience with naturalists claiming the rights of plants and wildlife. Surprisingly this is not the case. Nature conservation is both officially by law, and in the public mind recognized as a necessity. It has its legal place along the bargaining table when re-planning of an area (any area) comes up, though hard-liners would deny naturalists their rights to this place.

One reason for the good will toward conservation in Holland must be that much of the public spontaneously appreciates the out-of-doors whether they are knowledgeable on biological features or not at all. Nevertheless, progress could have shattered the last remnants of natural areas there if it had not been for

the organizing skills of conservationists early in this century. It was realized that lamenting progress while crying in the dwindling wilderness would not help; it is not in wilderness that decisions on land use fall, but in legislation and all sorts of councils. There the conservationists' message must ring out if it is to be heard at all. Since planning involves politics, and since politicians take notice when a plea is clearly supported by a large chunk of the public, the effective thing is to alert public opinion. A surprising number of natural history clubs was sprouting all over the country. Many local groups united into national organizations and energy was directed into streamlining the organization. When people get together to promote a cause, efficiency demands consultation among them. Every group must realize its strengths and concentrate on those aspects. This holds for Canada too.

M. M. Sweers

In describing here the situation on another continent, my hope is that part of the experience gained abroad will be applicable here. We certainly lack time to repeat everybody else's mistakes. We cannot transplant ideas from Europe uncritically, but I hardly can imagine that of many approaches that proved effective abroad, none at all would work in Canada. I will go into more detail now about the roles adopted in the Dutch conservation scene.

There is one national group dedicated emphatically to conservation, acquisition and management of so-called "nature monuments". Their small executive staff is extended by a very large council for which they choose influential people with connections in the business, administrative and scientific worlds willing to speak out for Conservation when the occasion arises. Although I frankly doubt that they all are ardent conservationists, even their part-time dedication is indispensible because their voices are heard in places when key decisions are taken. Now amidst the plenty of conservation-oriented associations, "Natuurmonumenten" is the one central and authoritative force with an extensive membership. Besides financial contributions, the membership by sheer numbers adds power to the society's claims. Throughout its 65 years of existence "Natuurmonumenten" has benefited from outstanding leadership. One measure of their success is that the Netherlands State now finances up to 50% of all the society's land acquisitions. For every land purchase substantial grants are assured on the provincial level also. Management expenses are heavily subsidized by the state (and still the staggering costs make financial status a reason for concern).

Quite on another level operate the natural history societies. There is a large one for adults, similar to the OFNC, with numerous local groups all over the country. For teenagers there are no fewer than three clubs to choose from. The one of which I was an active member for eleven years is the Netherland "Jeugbond" for the Study of Nature (NJN). Since its role in the Dutch conservation world is quite effective, I will tell how it is directing its approach in this field.

The NJN has about 1600 members in the age 12 - 23 years. The upper limit is rigidly enforced to retain the group's youthful vigor. Leadership is provided by

1971 CONSERVATION CALENDAR !

Here is what we've been looking for...a calendar displaying the beauty of our own area...a calendar with a conservation theme. Now we can send a gift to folks in faraway places to show them our local landscape and wildlife, in thirteen exquisite black and white photos by Club member Marguerite Sweers. Each is accompanied by a carefully chosen conservation message. This Trillium appears on the cover page. The Calendar, 9 1/2"x 12 1/2" on high quality paper, comes with a mailing envelope.

The 1971 CONSERVATION CALENDAR, published by the Ottawa Field-Naturalists' Club, is the work of the Education Committee. We hope every Club member will treat himself to one, and buy several for gifts. They will be available in good time for Christmas shopping at several local bookshops; or you may order by mail.

SEE REVERSE SIDE - The supply is limited - ORDER YOURS NOW!

********** ORDER YOUR CALENDARS NOW, using this form **********

We will mail them, without extra charge, to your friends.
Please enclose cheque or money order, payable to the
Ottawa Field-Naturalists' Club, or use cheque below.
Mail your order to: Henk Sweers, 4 Kimdale St., Ottawa 12.

Name _____

Address _____

Number of calendars @ $1.50 each _____ (Postage included)

Amount of cheque or money order _____
(Please add 15¢ on out-of-town cheques)
(Ont. residents add 5% Prov. Sales Tax)

MAIL ALSO TO :

1 _____

_____

_____

2 _____

_____

_____

Please put additional names on separate sheet, if required.

****

COUNTER CHEQUE Date _____

Bank _____

Branch _____

Pay to the order of OTTAWA FIELD-NATURALISTS' CLUB $_____

Sum of _____

Account
Number _____ Name _____

Signature _____

the kids themselves exclusively. Since youth activities everywhere are directed by adults, you can imagine the kick for twenty-year-olds to run a 1600-member nationwide organization without well-meaning adult interference at all! In Holland the NJN is the largest of only two groups providing teenagers with this challenge. It makes the Bond extremely attractive to ambitious young people with organizing talents. Many are no naturalists when they join, but soon become fascinated by their involvement.

The Bond has some 55 local groups. All hold weekly field trips by bicycle; transportation is no problem. As any Ottawa birder can tell you, youth is no obstacle to being expert in natural history. Most members do not limit their knowledge to only one field of natural history either. Attention is aimed at all sorts of living creatures. As a result the seniors are quite knowledgeable indeed. As some 55 groups have 40 to 50 weekend excursions a year, the NJN is in a good position to provide conservation authorities with information on natural areas, and this is exactly what they do.

Records of outings are made and someone is responsible for keeping these on file and summarizing information on each natural area. In this way local groups have an up-to-date survey of all interesting excursion sites within their range. Apart from this, several groups focus much talent and enthusiasm on detailed study of one particular area throughout a season (or longer). For specialized help they borrow other groups' experts during a weekend. The Bond's executive yearly puts out a nationwide list of the NJN's speakers and excursion leaders, including their specialties. Spending weekends with groups elsewhere, expenses paid, is much fun for the experts; it is a good way to keep them involved in the workload, while it makes the local inventories more valuable.

Copies of NJN inventory reports are mailed to conservation authorities, who have inside information on upcoming land development programs. A central reference file of all natural areas in the country is indispensible. This is handled by professionals but an amateur organization like the NJN, by sheer manpower, can make valuable contributions to it.

M. M. Sweers

Enthusiasm and manpower enable the Bond to influence the public attitude toward a better appreciation of nature. The local groups do this for instance with colourful exhibitions and the occasional guided tour for outsiders. The NJN's tools further include a beautifully printed magazine, and publishing facilities. Every year they issue a nature calendar, with pictures and layout obtained by a contest for members. A selling contest is held for the attractive, low-priced calendars, and sales run high. The NJN publishes propaganda in a variety of posters, brochures, stickers, etc. for distribution in schools and other places. Most of its publications, however, are scientific tables - usually edited by specialist old-members - of the species of assorted insects, and other unpopular beings. Further publications include a manual for inventories, and a 67-page illustrated introduction to conservation topics. The latter booklet got good reviews, and many outsiders ordered it. Does all this sound too deadly serious for

a youth group? Let me assure you, activist NJNers are a bunch of bouncing folkdancers and folksingers, with more or less artistic inclinations, who have a ball designing things and seeing them published. Spending creative energies with congenial folks is fun, however seriously you are concentrating.

To many members, one of the Bond's major attractions is its program of summer camps; about a dozen, each one lasting ten days. Again run entirely by the kids, but for each camp an adult couple is invited. In recent years a few camps have specialized on conservation. In such a camp, in 1966, under supervision of conservation authorities, they: (1) studied an agricultural re-development project surrounding a "natuurmonument"; (2) investigated and described the vegetation of the "natuurmonument" - sample plots were marked and mapped for future scientific research on the impact of the nearby agricultural project; (3) stands of Prunus serotina in another "natuurmonument" were weeded out - these American shrubs are foreign to the Dutch ecosystem and poison the soil for many endemic species; (4) a nature walk was conducted from the municipal camp taking along some 35 campers; (5) lectures were held by professionals.

I'm afraid that this all sounds too good to be true. The whole catalog of activities summed up by me, doesn't do justice to the fact that the NJN, like any other organization, has ups and downs. I mentioned the success stories over a period of several years, but it should be understood that for each success there have been disappointing experiences as well. How much the Bond gets done in a year largely depends on the availability of leadership on all levels of the organization. Once an enthusiastic nucleus of do-ers pops up, others jump on the bandwagon to share in the activities. Slacks usually follow, in which a group barely accomplishes more than holding on to the framework of the organization. This is not too bad because eventually a new do-er will stand up and inspire the group to new heights of activity. I therefore feel that it is better to use the available energies in a club to the hilt, instead of saving them for later.

Manpower and enthusiasm go a long way. I wonder how far they would bring the OFNC right now.

THE WESTERN SANDPIPER IN OTTAWA ?

D.F. Brunton

The fall of 1969 was a wonderful time to be birding at Ottawa Beach in the west end. Traditionally, this is a highly favoured spot for migrating waterfowl, especially waders, to touch down on their long flight away from winter. Last year such rarities as Red Phalarope, Hudsonian Godwit and Parasitic Jaeger "called it home" in late September and October.

September 24 was heavily overcast with a fairly strong north wind and temperature of 50°F. I wandered the mudflats of the Beach enjoying the abundant and interesting birdlife around me. Birds were particularly tame that day. It would seem that waders are slow to fly in bad weather. This helps to compensate the observer for his discomfort.

Among the numerous "peeps" I noticed a pair that appeared different from the familiar Semi's and Leasts. I feel sure they were Western Sandpipers, a bird for which there is no specimen or proof of occurrence for Ottawa. The bird was slightly but definitely larger than the Semipalmateds around it. In length the bill was slightly more than equal to width of the head; it was thick (for a peep), tapered evenly to its slightly downcurved tip; the base was the thickest part. The white line over the eye was very distinct. Top of the head was reddish-brown, the forehead white. The main feature of the body was a striking reddish-brown stripe on the shoulder that contrasted strongly with gray sides. Overall it resembled a very brown Semipalmated, although the sides appeared lighter. The sides of the neck had patches of gray buff with a few fine horizontal lines toward the back. Legs were grayish black. The bird called once: a high, thin "kreet" or "kreit".

Most observations were made from a distance of less than 50 feet. Although two birds were seen, the description is of one bird only, as its markings were more pronounced. The Western is a difficult bird to identify at the best of times, and birds in fall plumage do not represent the best of times! There have been sight records in the past for Ottawa, and other eastern Ontario areas have confirmed records (e.g. Kingston). Undoubtedly they pass through Ottawa in small numbers, but we may have to wait until a specimen is collected before its occurrence becomes "official".

BIRDS OF THE SPRING, 1970 Richard M. Poulin

Two of Ottawa's more active and experienced birders enjoyed the avifauna of Texas and Churchill, Manitoba, this spring; while in Ottawa the younger members, aided by the remaining experienced observers, saw seven birds never before seen in the region. Even though the credibility of some of these observations is currently under investigation, the influx of rare birds into the area probably won't be matched for some years to come. The following is an account of these and other interesting observations of the spring of 1970.

CORMORANTS On May 2, two Double-crested Cormorants were seen sitting on a log at Innis Point, Shirley's Bay. While these two were under observation a third was seen flying north along the river. Then on May 22, another Double-crested Cormorant was seen flying along the Ottawa River opposite Rockcliffe Park.

HERON, BITTERN, IBIS A Yellow-crowned Night Heron was spotted roosting in a pine tree in Rockcliffe Park on Sunday April 26 by two lads. It was not confirmed until Tuesday when three members of the Club found it in the same place. From then on a steady stream of people kept it under observation until it was last seen on the Thursday of that week. This was Ottawa's first record for Yellow-crowned Night Heron and only the sixth or seventh fully confirmed record for Canada....The locally rare Least Bittern was heard calling from the marsh immediately west of Watt's Creek at Shirley's Bay on June 6. As two were observed the following day it is believed that they probably bred there....Saturday the 23rd of May marked another first for Ottawa: a Glossy Ibis was found at the Ottawa Duck Club pond at Shirley's Bay. This ibis was seen on the next two days, although it was very skittish. This was an excellent record as the closest previous records come from the Montezuma Wildlife Refuge in New York State.

DUCKS & GEESE Due to the late break-up of the Ottawa River the waterfowl generally passed through our area without stopping. On April 8, however, two Snow Geese were spotted at the Champlain Bridge. Another Snow Goose was seen sitting on the ice at Shirley's Bay on April 19....Whistling Swans were reported at Shirley's

Bay on April 25. Eight of these majestic birds were seen flying along the river. Then on the 24th of May four immature Whistlers were spotted at Lochaber Bay. They were still there as late as June 12....Canvasbacks made an unusual spring appearance in the Ottawa area at Deschenes on April 12 where three were sighted. As many as four were observed as some Canvasbacks remained for two weeks....Oldsquaw, another irregular spring visitor, showed up five strong at Shirley's Bay on May 2. Two were observed lingering on until the next day.

VULTURES Three reports of this great aerialist occurred this spring: our best spring for these raptors. The first report came from South March on April 26; another from Uplands area on May 24; and a third, combining several sightings from the Ramsayville and Ridge Road area on May 29. Keep an eye open for these larger raptors - they are a delight to watch while they are in the air.

EAGLE & FALCON The report of a Golden Eagle feeding on a groundhog at the side of the road near Almonte caused quite a stir among Ottawa birders. This April report however has never been fully substantiated.... A Peregrine Falcon was observed flying over the woods at Britannia on May 16 with the possibility of another sighting at Beacon Hills on May 18. It is great to hear about sightings of this endangered species.

SHOREBIRDS Six Short-billed Dowitchers were seen at Almonte on May 24 and a dozen of these largish shorebirds were observed at Shirley's Bay on May 25, making this one of the best springs for dowitchers in recent times....An exciting find and another first, the Western Sandpipers observed at Almonte on June 6. The rust on the back and the long drooping bill of this peep were well observed and documented, as spring sightings are quite unusual for this western species. Western Sandpipers are expected to be found in the fall in this area, as are White-rumped Sandpipers (see page 122). A White-rumped was accompanying the Westerns on June 6 and was used to compare bill size and overall size.... One of the accidentals noted this spring was the Wilson's Phalarope that appeared at Almonte on May 24. The more colourful female, an oddity in that males are usually the more colourful in the bird world, was noted on our annual spring roundup.

WOODPECKERS The formerly abundant and now unfortunately scarce Red-Headed Woodpecker appeared right in the city, on May 2 near Carlingwood Shopping Centre.

FLYCATCHERS It was a good year for western birds in Ottawa. On May 24 a Western Kingbird was found at the junction of the Osgoode Road and River Road. This was another first for Ottawa and it stayed until at least May 26, allowing several observers excellent looks at this western counterpart of our Eastern Kingbird.

MOCKINGBIRD A Mockingbird set up residence in Rockcliffe Park from May 22 to at least the end of May. This was seen several times, and heard singing during the night as is a trait of mockers, by at least one lucky birder.

VIREO Only one report of a Yellow-throated Vireo came to light this spring from the area. This was near Ramsayville on May 24. This handsome vireo should be looked for, as it should be seen with more regularity.

WARBLERS Although the wood warblers trickled through Ottawa this spring, some excellent birds were noted. Two accidentals and two new records were made from this family alone. The accidentals were, first, Cerulean Warbler seen at Vincent Massey Park on May 11 and another observation of a Cerulean in another part of the Park on May 12. The other accidental showed up in force, apparently. Three sightings of Yellow-breasted Chat from the Ridge Road area, one on May 17 and two on May 24, make this the best year on record for these large un-warbler-like warblers. The two new records were Prothonotary on April 26, and Blue-winged Warbler on May 17 or 18. The Prothonotary was seen in Rockcliffe Park while the Blue-winged was seen near Manotick. Neither of these new warblers was observed satisfactorily enough to be included on the Ottawa list, but they are counted as Hypotheticals.

BLACKBIRDS Another first was Brewer's Blackbird. On April 19 at Beckett's Creek near Rockland two were well observed. Then on April 26 a Brewer's Blackbird conveniently sat on a lawn in Britannia and allowed itself to be observed for several hours.

FINCHES An interesting possibility of Cardinals nesting in our area occurred this spring. Two Cardinals, a male and a female, set up residence in a garden in Rockcliffe Park and it is hoped, bred there. Investigation was in progress at the time of writing. As there are no nesting records for Cardinals here, news of such is eagerly awaited....An Oregon Junco was observed at Confederation Heights school on April 24 by one of the younger members of the Club. With such keen and quick young observers, the future of Ottawa birding looks good indeed!

NATURE PUZZLE (p 114): What puzzles the Editor is, do you enjoy this feature? Would you like to see one in each issue? Do you have any we could use? And do you think we ought to publish answers?

ORIOLES OUSTED ? Cornell University News

Cornell University ornithologists think that Dutch elm disease may be robbing the northeast of more than trees -- it may be driving Baltimore Orioles from the region. Olin S. Pettingill Jr., director of Cornell's Laboratory of Ornithology, says, "The long, drooping lower branches of these trees provide at their tips the optimum sites so suited to the oriole's inherent skill in nest construction and inclination for predator-free situations. Now that the Dutch elm disease is destroying so many of these trees, we wonder what the effect will be on the population of Baltimore Orioles." Birdwatchers living in an area that has suffered the loss of elms can help the laboratory determine if Baltimore Orioles are discouraged from the region, by comparing the number of birds they heard singing this breeding season with those they heard in years before the trees died. "Next fall," he said, "after the leaves have fallen, scan the trees for nests. Then send us your report." (Cornell University, Ithaca, N.Y. 14850)

W O L F F I A

Sheila Thomson

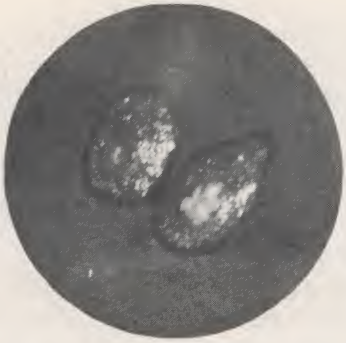
From the day we first learned that Wolffia was to be found in the Ottawa area, the search was on. What more intriguing quest than to find the smallest flowering plant in the world? In 1967, we finally discovered Wolffia in a pond near South March. To recognize at last the object of our search, was to realize that we had been seeing it for years, even wading through it, without knowing it.

The tiny floating duckweeds (Lemna and Spirodela) that cover patches of our local ponds and quiet waters are large in comparison to their minute relative Wolffia. The individual plant of Wolffia columbiana is a bead-shaped frond about one millimeter long, and, like an iceberg, it floats with most of its "bulk" submerged. Like duckweed, Wolffia reproduces in a pond by budding new plants at an astonishing rate, so that entire patches of the pond's surface may be hidden under a solid mass of Wolffia plants. The effect is that of a bright green meal floating on the pond -- "green cream of wheat" a friend aptly described it.

WOLFFIA AND DUCKWEED; hemlock twig gives scale. Larger light-coloured fronds with the dark spot are Spirodela polyrhiza. Plants of Wolffia fill in the background!

The next project was to find Wolffia in flower. When we announced our intention of finding Wolffia flowers, our various botanist friends either laughed outright, or smiled politely. (So seldom have Wolffia flowers been found, few botanists have ever seen them.)

Not at all discouraged by this show of amusement, as soon as the ice was off the ponds last April we began a weekly check of the Wolffia plants in a creek and favourite beaver pond in the Gatineau. The technique devised was not too complicated. We merely picked up a handy beaver stick, dipped it into the colony of Wolffia, and with hand lens squinted at the plants adhering to the dipstick. Days, weeks, and months went by, as the dipstick ceremony became an automatic part of crossing beaver dams. On one September stroll around a Gatineau beaver pond, as we mechanically went through the dip and squint routine, a pale fuzzy something was seen protruding from the top of one Wolffia bead. An anther...the male flower! Another plant bore a structure that had to be the female flower, a little disc-shaped protrusion bearing a liquid globule.



Triumphantly we presented our find to our scoffing botanical friends, and properly impressed they were! Not so, however, the reaction of our friends in other walks of life. One look into the microscope was enough to call forth an incredulous "Is that IT?", and disappointment registered in spite of efforts to be politely enthusiastic.

Because Wolffia is seldom found flowering, unanswered Wolffia questions abound, and some of these are being investigated by amateur naturalists in the Club. Stand by for further installments on Wolffia, smallest of all flowering plants.

Herded by a September wind, Wolffia masses decorate the black waters of a Gatineau beaver pond with graceful swirls of pale green. Photos : Anne Hanes

Friends and Flowers in Faraway Fields ....

THE O F N C HAMILTON - NIAGARA WEEKEND

.... by Trevor Cole

At 6:30 p.m. on Friday May 22, a coach left Albert Street station carrying 24 OFNC members on the first leg of their trip to Hamilton and Niagara, and pulled up in Toronto at 10:45. Next morning we picked up three more members, and left the hotel at 8:30 to drive to Hamilton Botanic Gardens. There we were welcomed by the Director, Mr. Leslie Laking, and met Mr. John Lamoureux, Conservationist on the Gardens staff, and Mr. George North, one of the foremost authorities on birds of this region. With our new guides we drove to the McMaster University grounds and, leaving the bus near Cootes Paradise Sanctuary, we divided into two groups to take in some of the trails among the shoreline woods. The most spectacular bird seen was a Common Egret; and the noisiest and hardest to see was the Indigo Bunting of which we were to see and hear much more before our trip was over. Before long we were all chewing pieces of Sassafras, (whose roots give us Root Beer) and admiring the lush subtropical trees such as flowering dogwood (Cornus florida) and witch-hazel (Hamamelis virginiana).

The weather was not very kind to us on this trip. Most of the time it was cloudy and dull with rain in the afternoons, but we didn't let that stop us. After a brief look at the Nature Interpretive Centre of the Gardens and some lunch, we were on our way to the Short Hills Wilderness Area owned by the Hamilton Nature Club. As we were to pass through Vineland we decided to call at the Research Station there, to admire the rain dropping off the wonderful banks of Rhododendrons, and the creamy white candles on the horse chestnut (Aesculus hippocastanum). A little farther on we passed the Comfort Maple, said to be the oldest sugar maple in Canada with a trunk circumference of 19 feet and 85 feet high, but because of rain we just waved as we went by.

At Short Hills we met our guides from the Hamilton and Niagara clubs: George Meyers and Gus Yaki. The Short Hills Wilderness Area covers some 35 acres and is

probably the last remaining stand of original Niagara Escarpment flora. Once again we divided and set out in opposite directions on a more or less circular path. One birder, who shall be nameless, got so engrossed that he lost his group and got collected by the other after the two parties passed.

By me, Short Hills will long be remembered for the size of its trees: tulip trees (Liriodendron tulipifera), black walnut (Juglans nigra), and shagbark hickory (Carya ovata), with trunks going up straight for 60 feet without a branch. Cucumber magnolias (Magnolia acuminata) were in flower way above our heads. Luckily Gus had shown us a flower at the beginning, collected from a young tree. Sassafras and spice bush (Lindera benzoin) filled the air with their scent as we brushed by. And through, around, over and under everything else were wild grape vines; both riverbank grape (Vitis riparia) and silverleaf grape (V. aestivalis var. argentifolia) with stems up to 4 inches in diameter trailing from the tree tops. In places their weight had been sufficient to pull the trees down. We kept expecting to see Tarzan swing through the trees.

The centre of Short Hills is bisected by a power line clearing which at least gave us the chance to see a Red-shouldered Hawk quartering the area in its nonstop hunt for food. Once again Indigo Buntings and warblers played peek-a-boo around the tree trunks and numerous birds were heard but not seen. Dotted throughout the area were the trunks of chestnut (Castanea dentata) which had been killed in the thirties by chestnut blight but which were still standing. No wonder the timber was much in demand for posts and fencing. Young plants are only just beginning to reappear, the disease having at last abated.

It was nearly 4:30 when we got back to the bus and by this time we were all a little damp and tired; but after another head count to make sure all were present we set off for the Lawrence C. Sherk Nature Reserve and Big Game Farm. The big game was us and the hunters were mosquitoes. The one good thing about the wet cold weather was that we were troubled very little by the stings on wings.

Larry's property north of Port Colbourne has open meadows and natural woodland, and on a fairly rapid trip through we managed to find the small group of twinleaf (Jeffersonia diphylla) in the centre of the property. Then back to Niagara - a hot bath and food.

Sunday morning we went on to Niagara Gorge where Bill Snowdon of the Niagara Parks Commission led us on a most interesting walk down to the bottom. Anyone who is in the area should make a point of going down; the paths are easy to follow and it is very rewarding. The boulders that have fallen during the years are covered with plants. One in particular caught my eye. It was ten feet high and covered with wild ginger (Asarum canadense). It is most unusual to be able to see the flowers without getting on hands and knees. Once again the trees were outstanding: chestnut and chinquapin oak (Quercus prinus, Q. muhlenbergii), black cherry and walnut (Prunus serotina, Juglans nigra), white mulberry (Morus alba) - this last is perhaps the only tree of this species left in the area. One unusual plant was cliff-brake fern (Pellaea glabella) growing on the sheer rock face near the top of the gorge.

After lunch we went to Point Abino on the shore of Lake Erie. This is a cottage area with restricted access and much of it has been left unspoiled. The banks were a sight with wild phlox and columbine (Phlox divaricata, Aquilegia canadensis) both of which occur near Ottawa but not in such quantity nor so large. The ground was carpeted beneath the trees with virginia and broad-leaved waterleaf (Hydrophyllum virginianum, H. canadense). Our guide was a young man of 88, Mr. Bert Millar. At times we had a job to keep up with him.

We eventually dragged ourselves away at four and headed back to Toronto where we dropped our Toronto members off; and so back to Ottawa. Our thanks are due to the many people who did such an excellent job of guiding us around and showing us the many unusual plants; most of all to Larry Sherk who made all arrangements at that end, and who acted as commentator on things of interest as we passed. The weekend was much enjoyed by all present and could be the forerunner of many such trips. Ideas for locations to visit in the future would be appreciated.

OFNC EXCURSIONS IN THE FALL MONTHS

Arranged by the Excursions and Lectures Committee
Ewen C.D. Todd, Chairman

SATURDAY 12 SEPT.
SUNDAY 20 SEPT.
SATURDAY 26 SEPT.
SUNDAY 4 OCT.
SATURDAY 10 OCT.
SUNDAY 18 OCT.

BIRDS IN FALL MIGRATION - SHIRLEY'S BAY AND OTTAWA BEACH

Meet: Britannia Drive-In, 8:00 a.m.
Leaders: Various. Half-day trip.

SATURDAY 19 SEPT.

BILL'S BIRTHDAY BIRDING TRIP TO PAKENHAM

Meet: Health & Welfare (Tunney's Pasture) 8 a.m. Leader: W. Holland (234-6705). All day; bring lunch.

SATURDAY 26 SEPT.

BOTANICAL TRIP TO EAST SIDE OF GATINEAU RIVER

Meet: Ottawa City Hall, parking lot. 9:30 a.m. Leaders: Clary Frankton and Jim Ginns (827-0212).
Bring lunch.

SATURDAY 24 OCT.

GEOLOGY AND MINERALOGY OF GATINEAU

Meet: Health & Welfare 9:00 a.m.
Leader: Ernie Nickel (232-4042).
All day trip; bring lunch. If you wish to collect samples bring hammer and collection basket. Copies of 'A Guide to the Geology of Ottawa District' by Alice Wilson, and 'A Guide to the Geology of the Gatineau-Lievre District' by D. Hogarth, will be available for purchase from the leader. Also of interest is 'A Guide to the Geology and Scenery of the National Capital Area' by D.M. Baird, $2.50 Queen's Printer.

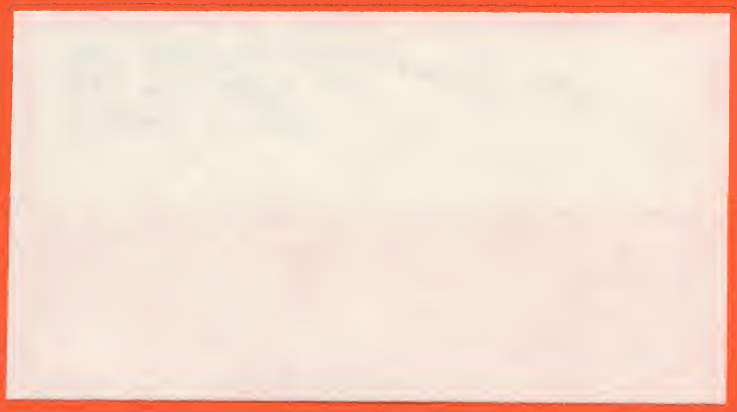
TRAIL & LANDSCAPE

published by

THE OTTAWA FIELD-NATURALISTS' CLUB

Postage paid in cash at 3rd class rate
Permit No. 3037

Change of Address Notices and undeliverable Copies:
Box 3264 Postal Station C, Ottawa 3.
Return postage guaranteed



Lithographed by
John Marquardt, Printer